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1791				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary**Application No.**

10/551,117

Applicant(s)CARLOMAGNO, GIOVANNI
MARIA**Examiner**

CYNTHIA SZEWCZYK

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 13-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The 103 rejection in view of MCMASTER (US 4,515,622) has been withdrawn.
112 2nd paragraph rejections of claims 1-12 have been withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by SCHULTZ (US 4,711,655).

SCHULTZ teaches an apparatus for tempering a bent glass sheet, comprising means for conveying the bent glass sheet (col. 3, lines 48-59) and a pair of blastheads (56 and 58 in figure 1). The blastheads comprise upper (56 in figure 1) and lower blastheads (58 in figure 1), wherein each blasthead comprises a plurality of spaced elongated plenums (212 and 68 in figure 2) and wherein the plenums extend transversely to the direction of conveyance of the bent glass sheet (see figure 2). The plenums contain an array of quench nozzles (104 in figure 6) wherein the length of the quench nozzles exceeding their diameter, as can be seen in figure 6. Figure 4 shows that the quench nozzles of each plenum are mutually inclined to provide diverging jets of quench gas and that each array of quench nozzles is curved in at least one direction.

Regarding claim 2, figure 4 shows that the array of quench nozzles (104) comprises rows of quench nozzles extending along lines which are curved in the direction of elongation of the plenums.

Regarding claim 3, SCHULTZ discloses that the rows of quench nozzles are curved to match the curvature of the bent glass sheet and are curved in a direction that is the same as the bent glass sheet (col. 9, lines 59-62).

Regarding claim 4, SCHULTZ discloses that successive plenums in the direction of conveyance are arranged so that their profile at the level of the nozzles is curved in the direction of conveyance (col. 2, lines 63-68).

Regarding claim 5, see the discussion of claim 3.

Regarding claim 6, SCHULTZ discloses that the blastheads are arranged to be movable towards and away from each other (col. 5, lines 25-27).

Regarding claim 7, figure 2 shows that successive plenums of the lower blasthead are connected to each other by connecting surfaces (64) which figure 3 shows is inclined downward away from the centerline.

Regarding claim 8, figure 3 shows the unlabeled equivalent of the connecting surfaces (64) of the lower blasthead diverges away from the centerline.

4. Claims 1-3 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by FRANK et al. (US 5,507,852).

FRANK teaches an apparatus for tempering a bent glass sheet, comprising means for conveying the bent glass sheet (col. 2, lines 41-42) and a pair of blastheads

(42 and 44 in figure 1). The blastheads comprise upper (42 in figure 1) and lower blastheads (44 in figure 1), wherein each blasthead comprises a plurality of spaced elongated plenums (52 in figure 2) and wherein the plenums extend transversely to the direction of conveyance of the bent glass sheet (see figure 2). The plenums contain an array of quench nozzles (58 in figure 2). Figure 2 shows that the quench nozzles of each plenum are mutually inclined to provide diverging jets of quench gas and that each array of quench nozzles is curved in at least one direction.

Regarding claim 2, figure 2 shows that the array of quench nozzles (58) comprises rows of quench nozzles extending along lines which are curved in the direction of elongation of the plenums.

Regarding claim 3, FRANK discloses that the rows of quench nozzles are curved to match the curvature of the bent glass sheet and are curved in a direction that is the same as the bent glass sheet (col. 3, lines 59-63).

Regarding claim 9, figure 2 shows that the quench nozzles are formed as bores in a nozzle bar (58), and figure 2 also shows that the outlets of the nozzles are level with a surface of the bar.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over FRANK et al. (US 5,507,852) in view of MASUHIDE (JP 2000-247633).

FRANK teaches an apparatus for tempering a bent glass sheet with air quenching. FRANK is silent to the shape of the nozzle bores.

MASUHIDE teaches a bed structure for providing glass sheets with an air support. Figure 3 of MASUHIDE shows that the holes are part cylindrical (20) and conical (23). It would have been obvious to one of ordinary skill in the art that the bore of FRANK could have had the shape of the air discharge hole of MASUHIDE because FRANK simply requires that the bores supply air through openings (col. 3, lines 45-48), which MASUHIDE would accomplish.

Regarding claim 11, figure 2 of MASUHIDE shows that the length of the cylindrical part of the bore (20) is greater than the length of the conical part (23).

Regarding claim 12, MASUHIDE teaches that the material of the bores, and in turn the bar, may be a heat resistant ceramic (trans. para. 0024).

8. Claims 10 rejected under 35 U.S.C. 103(a) as being unpatentable over FRANK et al. (US 5,507,852) in view of FUNK et al. (US 2006/0277947 A1).

FRANK teaches an apparatus for tempering a bent glass sheet with air quenching. FRANK is silent to the shape of the nozzle bores.

FUNK teaches a bed structure for providing glass sheets with an air support. Figure 5 of FUNK shows that the holes are part cylindrical (18) and conical (16). It would have been obvious to one of ordinary skill in the art that the bore of FRANK could have had the shape of the air discharge hole of FUNK because FRANK simply requires that the bores supply air through openings (col. 3, lines 45-48), which FUNK would accomplish.

Regarding claim 11, figure 5 of FUNK shows that the length of the cylindrical part of the bore (18) is greater than the length of the conical part (16).

Regarding claim 12, MASUHIDE teaches that the material of the surface, and in turn the bar, may be a ceramic (para. 0042).

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over FRANK et al. (US 5,507,852) in view of MASUHIDE (JP 2000-247633) as applied to claims 10-12 above, and further in view of RHONEHOUSE (US 4,297,121).

FRANK as modified by MASUHIDE teaches an apparatus for tempering a bent glass sheet with air quenching using nozzle bars. Modified FRANK is silent to the use of polytetrafluoroethene.

RHONEHOUSE teaches that Teflon (also known as polytetrafluoroethene) may be used in glass manufacturing processes because it is heat resistant and it reduces wear on glass manufacturing apparatuses (col. 5, lines 14-20). It would have been obvious to one of ordinary skill in the art that Teflon could have been used as the material of the bar because it is a heat-resistant material able to withstand temperatures of heated glass.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over FRANK et al. (US 5,507,852) in view of FUNK et al. (US 2006/0277947 A1) as applied to claims 10-12 above, and further in view of RHONEHOUSE (US 4,297,121).

FRANK as modified by FUNK teaches an apparatus for tempering a bent glass sheet with air quenching using nozzle bars. Modified FRANK is silent to the use of polytetrafluoroethene.

RHONEHOUSE teaches that Teflon (also known as polytetrafluoroethene) may be used in glass manufacturing processes because it is heat resistant and it reduces wear on glass manufacturing apparatuses (col. 5, lines 14-20). It would have been obvious to one of ordinary skill in the art that Teflon could have been used as the material of the bar because it is a heat-resistant material able to withstand temperatures of heated glass.

Response to Arguments

11. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CYNTHIA SZEWCZYK whose telephone number is (571)270-5130. The examiner can normally be reached on Monday through Thursday 7:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/551,117
Art Unit: 1791

Page 9

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/ Carlos Lopez/
Primary Examiner, Art Unit 1791